

HAEMATOPINUS EURYSTERNUS (DENNY, 1842)
(HAEMATOPINIDAE, ANOPLURA, INSECTA): PROPOSED
VALIDATION UNDER THE PLENARY POWERS.¹
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1. The objective of the present application is to ask the International Commission on Zoological Nomenclature to use its plenary powers to preserve the well known names *Haematopinus eurysternus* (Nitzsch, 1818) (Haematopinidae) and *Solenopotes capillatus* Enderlein, 1904 (Linognathidae) by suppressing Burmeister's brief description and the material of Nitzsch, and validating *H. eurysternus* (short-nosed cattle louse) in the sense of Denny (1842, *Monographia Anoplurorum Britanniae*, pp. 29–30, Plate 24, Fig. 5) and authors, *nec* Nitzsch (1818 and 1864). The facts of this case became apparent while engaged in revisional studies of Haematopinidae and Linognathidae. These facts are set out below.

2. Nitzsch (1818, *Magazin der Entomologie*, von E. F. Germar, Halle, Germany 3 : 305) mentioned a louse from "Bovis Tauri" under the name *Pediculus eurysternus* without description and figures. A note to this species was published posthumously in 1864, and this note showed very clearly that *Pediculus eurysternus* Nitzsch (1818) was meant to be the little blue cattle louse, presently known as *Solenopotes capillatus* Enderlein (1904). Nitzsch states (1864, *Zeitschr. für die gesamten Naturwissenschaften* 23 : 27–28) that: "... eine Kuh besass eine ganz eigentümliche Laus, welche bei flüchtiger Vergleichung der Hirschlaus nah verwandt scheint."; (translation: "... a cow harboured a rather strange louse which seems on the first glance to be closely related to the louse of the red deer."). It is true that *Solenopotes capillatus* from cattle resembles *Solenopotes burneisteri* (Fahrenholz, 1819) from the European red deer in general appearance. However, *P. eurysternus* Nitzsch (1818) is a nomen nudum.

3. Through the courtesy of Prof. Dr. Hüsing, Martin-Luther-Universität in Halle-Wittenberg, Germany, the original material apparently used by Nitzsch was available to us for study. The 3 females and 3 nymphs were found in the bottle bearing a handwritten label apparently by Giebel. They were completely dried out but still in fairly good condition. Three females and 2 nymphs were unmistakably *Haematopinus eurysternus* (Nitzsch) (*nec* Denny, 1842) (= *Solenopotes capillatus* Enderlein). One nymph was apparently *Linognathus vituli* (Linnaeus, 1758).

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4. Stephens (1829, *Systematic Catalogue of British Insects* 2 : 239) listed *Haematopinus eurysternus* as "9325. 5 *eurysternus*. (Germ. M. (Nitz.) iii. 305 ?).

5. Burmeister (1838, *Genera quaedam Insectorum* 1 (4) : *Pediculus*, No. 14) listed *P. eurysternus* as "14 *P. eurysternus*: capite cum thorace latissimo pedibusque testaceo, abdomine albo; spiraculis in segmentorum margine prominentibus. Long. 2/3''' . An *Ped. Vitul.* Linn.? Habit. in Bove tauro." He recognized the work of Nitzsch (1818) and referred *P. eurysternus* to the little blue cattle louse, presently known as *Solenopotes capillatus*.

According to the Code (Article 12), *Pediculus eurysternus* Nitzsch (1818) is obviously a *nomen nudum*, and Burmeister's work must be considered the first description of this species. Thus, the author of *Pediculus eurysternus* should be Burmeister (1838) not Nitzsch (1818, 1864). According to the strict application of the Code the name *Solenopotes capillatus* Enderlein (1904, *Zool. Anz.* 28 (4) : 143-144) should become a junior synonym of *Haematopinus eurysternus* (Burmeister, 1838).

6. Denny (1842, *Monographia Anoplororum Britanniae* p. 29-30, Plate 25, Fig. 5) described and illustrated a "Louse of the Ox" under the name *Haematopinus eurysternus*. He states that: "... abdomen ... with four longitudinal rows of fuscous horny excrescences, the lateral ones surrounding the spiracula..." Although works of Stephens, Nitzsch, and Burmeister were cited, the louse that Denny described was in fact the species known today as *Haematopinus eurysternus*. Thus, Denny was the first author who used the name *Haematopinus eurysternus* for the short-nosed cattle louse.

7. Gurlt (1843, *Magazin für die gesamte Tierheilkunde* 9 (1) : 10) described and illustrated *Haematopinus eurysternus* sensu Denny, but attributed the authorship of this species to Nitzsch (1818).

8. Giebel (1874, *Insecta Epizoa*: 41-42, pl. 2, fig. 8) apparently had access to Nitzsch's original material, notes, and illustrations. In "Insecta Epizoa, Die auf Säugetieren und Vögeln schmarotzenden Insekten, nach Christian L. Nitzsch's Nachlass," Giebel described and illustrated *Haematopinus eurysternus* (Nitzsch) sensu Nitzsch (1818), which was subsequently described as *Solenopotes capillatus* Enderlein, 1904. Giebel stated that "Die Baine nehmen vom ersten bis zum dritten Paare an Dicke zu, doch nicht im Grade wie bei der Hirschlaus ... Der Hinterleib ist bei den Weibchen breit oval ... scharf segmentiert, doch dadurch an den Rändern nur gekerbt, wogegen am Rande des dritten bis achten Segments je ein röhriges, braunes Spiraculum hervorragt. Die Farbe ist hellbraun ... und bei gefülltem Magen bläulich unrein."; (English translation: "Thickness of legs increasing from first to third pair, yet not in the degree as found in the louse of the red deer ... The female abdomen is broad oval ... strictly segmented, on the margins only crenated, but on the margin of the 3rd to the 8th segment each with a protruding tubuliform brown spiracle. The colour is light brown ... and dirty bluish when the stomach is filled."). Giebel further stated in his discussion that "Die von ihm (Nitzsch; our insert) gegebene Abbildung ist nach den annoch vorhandenen Spiritusexemplaren wie alle Nitzsch'schen Zeichnungen sehr getreu und weicht von Denny's Beschreibung und Abbildung so erheblich ab, dass man an der Identität beider gerechte Zweifel haben muss."; (English translation: "The figures given by him (Nitzsch)

are in agreement with the original alcohol specimens before me and very precise as all other drawings of Nitzsch, differing from Denny's description and figures so much that the identity of both is truly in question." Giebel herewith pointed out the discrepancy between Nitzsch's and Denny's descriptions, and expressed his doubt about the identity of what was known as 'eurysternus' (*Pediculus eurysternus* Nitzsch, 1818; *Haematopinus eurysternus* Denny, 1842—*nec* Nitzsch, 1818).

9. Piaget (1880, *Les Pédiculines*: 648, Pl. 53, Fig. 1) used the name *Haematopinus eurysternus* sensu Denny (1842).

10. Enderlein (1904, *Zool. Anz.* 28 : 144, Figs. 14 and 15) described, as new to science, *Solenopotes capillatus* for the little blue cattle louse, which was already described as *Haematopinus eurysternus* Nitzsch by Burmeister (1834) and Nitzsch (1864). Thus *S. capillatus* in fact became a junior synonym of *H. eurysternus* (Burmeister).

11. The common usage of the name *Haematopinus eurysternus* sensu Denny (1842) for the short-nosed cattle louse has remained unchanged since Denny (1842) except for Giebel (1874), and *Solenopotes capillatus* Enderlein has been unquestionably used since 1904. This usage has been widely accepted by entomologists, biologists, veterinarians, livestock specialists, and others throughout the world. These names have been uniformly used in the extensive literature of parasitology, entomology, systematics, veterinary medicine, livestock science and others for more than a century in the sense of Denny (1842) and Enderlein (1904). The works of Nitzsch (1864) and Giebel (1874) apparently did not influence subsequent workers in the use of these names.

12. The following major references used *Haematopinus eurysternus* sensu Denny and *Solenopotes capillatus* Enderlein:

Osborn, H. 1896. Insects affecting domestic animals, *Bulletin of USDA Division of Entomology*, 5 (new series) : 172–175.

Ferris, G. F. 1919–1935. *Contributions Toward a Monograph of the Sucking Lice*, Stanford University Publications 2 (6) : 448–452.

Ferris, G. F. 1951. The sucking lice, *Mem. Pac. Coast Ent. Soc.* 1.

Fahrenholz, H. 1939. *Mitteilungen Ent. Verein Bremen* 20 : 34.

Stojanovich, C. J., and Pratt, H. D. 1965. *Key to the Anophura of North America*, U.S. Dept. of Health, Education, and Welfare, p. 5, 22.

Hermes, W. B. 1915. (subsequent editions to 1967). *Medical Entomology* Macmillan, New York.

James, M. T., and Harwood, R. F. 1969. *Hermes's Medical Entomology*, 6th ed. Macmillan, N.Y. P. 143.

Busvine, J. R. 1966. *Insects and Hygiene*. Methuen, London, p. 253.

Chandler, A. C., and Read, C. P. 1961. *Introduction to Parasitology*. J. Wiley and Sons, New York and London, p. 633.

Waterhouse, D. F. 1970. *The Insects of Australia*. Melbourne Univ. Press, Carlton, Victoria, Australia, p. 376–386.

Richards, O. W., and Davies, R. G. 1964. A. D. Imms. *A General Textbook of Entomology*. Methuen Co. Ltd., London, p. 414–417.

Tillyard, R. J. 1926. *The insects of Australia and New Zealand*. Angus and Robertson Ltd., Sydney, Australia.

Freund, L. 1918. Eine seltene Rinderlaus in Böhmen. *Lotos Naturwiss. Ztschr.* 66 : 40–41.

Freund, L. 1935. 13. Ordnung. Läuse, Anoplura. In Brohmer et al. : *Die Tierwelt Mitteleuropas*. 4 (3) : IX, 1–26 (18/19).

Jancke, O. 1938. Die Anopluren Deutschlands. In F. Dahl : *Die Tierwelt Deutschlands und der angrenzenden Meeressteile*, 35 : 43–76 (57/61/62).

Haematopinus eurysternus sensu Denny and authors is commonly used in many hundreds of entomological and veterinary publications during the past 130 years.

13. *Solenopotes capillatus* Enderlein, 1904 is the type-species of the genus *Solenopotes* Enderlein. Any nomenclatorial change for *S. capillatus* related to *Haematopinus eurysternus* will cause a great confusion in the literature and hamper the progress of science.

14. The strict application of the Code in this case will cause endless confusion in the literature, and will retard the progress in the understanding of Anoplura. Therefore, the present usage of the names *Haematopinus eurysternus* (Nitzsch, 1818) sensu Denny (1842) and authors for the short-nosed cattle louse and *Solenopotes capillatus* Enderlein for the little blue cattle louse should remain unchanged for stability of the nomenclature in Anoplura.

15. For the reasons set forth in the present application the International Commission on Zoological Nomenclature is asked:

- (1) to use its plenary powers to suppress the specific name *eurysternus* Burmeister, 1838, as published in the binomen *Pediculus eurysternus*, and any other use of that combination before Denny, 1842, for the purposes of both the Law of Priority and the Law of Homonymy;
- (2) to place the generic name *Solenopotes* Enderlein, 1904 (gender: masculine), type-species, by monotypy, *Solenopotes capillatus* Enderlein, 1904, on the Official List of Generic Names in Zoology;
- (3) to place the following specific names on the Official List of Specific Names in Zoology:
 - (a) *eurysternus* Denny, 1842, as published in the binomen *Haematopinus eurysternus*, as interpreted by the lectotype designated herein;
 - (b) *capillatus* Enderlein, 1904, as published in the binomen *Solenopotes capillatus* (type-species of *Solenopotes* Enderlein, 1904);
- (3) to place the specific name *eurysternus* Burmeister, 1838, as published in the binomen *Pediculus eurysternus* (as suppressed under the plenary powers in (1) above) on the Official Index of Rejected and Invalid Specific Names in Zoology.

Lectotype Designation: *Haematopinus eurysternus* Denny, 1842, lectotype, female, Britain, "1852–98", Denny Collection; paralectotype, female, Britain, "1852–98", Denny Collection. These specimens are deposited in the Denny Collection of the British Museum (Natural History). The description of this species is referred to Ferris (1933, *Contributions Toward a Monograph of the Sucking Lice*, Part 6, pp. 450–2, Figs. 263, 264).

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